c) transmitting the spectrum distribution through a port to a readable electronic memory for subsequent analysis of the object.

7. (Amended). The method recited in Claim 5 which includes the step of converting the electronic signals into digital information for storage, comparison or analysis of the object and its condition.

16. (Amended). A low cost, lightweight apparatus for accumulating and transmitting a wide spectral analysis of ~~an~~ objects including tissue and fluids for early analysis and detection of their condition , said apparatus comprising:

a) a sensor array for accumulating a plurality of charges reflecting a wide spectrum color distribution of light segments reflected by an object to be analyzed;

b) a transmittal device connected to said array for transmitting said spectral distribution to a remote analytical device for early analysis of the spectral distribution of light of said object to detect its physical condition.

29. (Amended). An apparatus as recited in claim 28 in which said sensing device is calibrated such that the same segments of diffracted light wavelengths are repeatedly separated and diffracted upon substantially the same area of the array.

30. (Amended). An apparatus as recited in claim 28 in which said sensing device is aligned such that at least one segment of wavelengths of light is always diffracted upon the same area of the array.

AH contd

31. (Amended). An apparatus as recited in claim 28 in which said spectral distribution comprises at least three data points.

32. An apparatus as recited in claim 28 in which the distribution is transmitted through an RS 232 port.

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33. A low cost sensing apparatus for obtaining a spectral distribution of an object, including plants, tissue and fluids, said apparatus including;

a) a sensing unit for receiving reflected light and having a diffraction device for separating the reflected light into segmented wave lengths;

b) a linear array mounted in the path of said diffracted light for receiving the segmented wave lengths and for electronically measuring the magnitude of thereof; and

c) a target light positioned adjacent the sensing unit for emitting light upon the source of the reflected light for identifying the object whose spectral distribution is being obtained.

34. A sensing apparatus as recited in claim 33 in which said target light is directed in the opposite direction of the reflected light.

35. A wide spectrum image device comprising;

a) a housing receiving light from an object and having a diffraction device for separating the light into segments of different wave lengths;

b) a linear array positioned adjacent said housing for receiving the separated wavelength segments and for electronically recording the magnitude thereof as an image; and

c) an aiming device having a beam of light supported by the housing for identifying the source object of the receiving lighting.

36. A wide spectrum image device as recited in claim 35 which includes an electronic identifier receiving the electronically recorded image from the array and for identifying at least one property of the object.

A5 cont.

37. A wide spectrum image device as recited in claim 36 in which said identifier is a digital signal processor that includes an A to D converter for converting the magnitude of the separated wave lengths to digital information

38. A wide spectrum image device as recited in claim 36 in which said identifier is a micro processor programmed to run a regression analysis to determine the similarity between a first image and a second image.

39. An image apparatus for selectively identifying objects, including fluids and tissue, and their condition, from within a population; said apparatus comprising:

a) a sensing device for receiving reflected light from an object of a population, said device including a diffraction element for separating the reflected light into a plurality of segments of wavelengths and an array receiving said reflected light for measuring the magnitude of the segments of reflected light to obtain a spectral distribution;